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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,367	11/22/2000	Gwilym Luff	MLNR-08001	6598
28960	7590	10/06/2004	EXAMINER	
HAVERSTOCK & OWENS LLP 162 NORTH WOLFE ROAD SUNNYVALE, CA 94086			NGUYEN, DUNG X	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/721,367

Applicant(s)

LUFF, GWILYM

Examiner

Dung X Nguyen

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1 - 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 6, 13 - 15, 17 - 22, 29 - 32, 39 - 41, and 43 is/are rejected.
- 7) ☒ Claim(s) 7 - 12, 16, 23 - 28, 33 - 38, and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. Applicant's arguments filed on July 17, 2004 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Carlin et al. (US patent # 5,633,896)..

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

3. **Claims 1 – 4, 13 – 15, 17 – 20, 29, 30, 39, 40, and 43 are rejected** under 35 U.S.C. 103(a) as being unpatentable over figure 1 admitted as the prior art by applicant (hereafter as figure 1), and further in view of Carlin et al. (US patent # 5,633,896).

Regarding claim 1, figure 1 shows (page 1, line 24 to page 2, line 23 of the specification):

- Block 10 for receiving input;
- Block 20 for mixing the input;
- Block 40 for filtering the input;
- Block 60 for standing a monostable to output a pulse for each cycle; and
- Block 70 for filtering the modulation components thereby recovering the desired audio frequency.

Figure 1 differs from the instant claimed invention that it does not show the steps of shifting the signal and summing at the end for combining the outputs.

However, Carlin et al. discloses (figure 4):

- The mixer (180) for shifting and separating the input signal to I and Q signals (column 4, lines 9 – 11);
- Adder (192) for summing the outputs from I channel (188) and Q channel (190).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine figure 1 and Carlin et al. as providing the requirements of the instant claimed invention for demodulating an input signal using a plurality of monosables.

Regarding claim 2, as followed by the limitations analyzed in claim 1, Carlin et al. further discloses (figure 4) that Q channel signal (190) is in phase quadrature to the in-phase channel signal (188).

Regarding claim 3, as followed by the limitations analyzed in claim 1, Carlin et al. further discloses (figure 4) that mixer 180 for shifting and separating the input signal to I and Q signals (column 4, lines 9 – 11); while figure 1 discloses IF filter (40) coupled to the mixer (20) (page 2, lines 3 – 4 of the specification).

Regarding claim 4, as followed by the limitations analyzed in claim 3, Carlin et al. further discloses (figure 4) that I channel (188) and Q channel (190) is equal to the number of mixer (180).

Regarding claim 13, the limitations are analyzed in the same manner set forth as claim 1.

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Regarding claim 14, the limitations are analyzed in the same manner set forth as claim 2.

Regarding claim 15, as followed by the limitations analyzed in claim 14, figure 1 further discloses that wherein the input signal to the superhet receiver is a radio frequency signal and the output signal from the superhet receiver is intermediate-frequency signal (page 1, line 24 to page 2, line 7 of the specification).

Regarding claim 17, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 18, the limitations are analyzed in the same manner set forth as claim 6.

Regarding claim 19, the limitations are analyzed in the same manner set forth as claim 3.

Regarding claim 20, the limitations are analyzed in the same manner set forth as claim 4.

Regarding claim 29, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 30, the limitations are analyzed in the same manner set forth as claim 3.

Regarding claim 39, the limitations are analyzed in the same manner set forth as claim 1.

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Regarding claim 40, the limitations are analyzed in the same manner set forth as claim 3.

Regarding claim 43, the limitations are analyzed in the same manner set forth as claim 1.

4. **Claims 5, 6, 21, 22, 31, 32, and 41 are rejected** under 35 U.S.C. 103(a) as being unpatentable over figure 1 admitted as the prior art by applicant (hereafter as figure 1), Carlin et al. (US patent # 5,633,896), and further in view of Underhill (US patent 6,275,101 B1).

Regarding claim 5, figure 1 and Carlin et al. differ from the instant claimed invention that they do not show that wherein the monostables pair comprises:

- a. a first monostable; and
- b. a serial circuit coupled in parallel to the first monostable, the serial circuit includes an inverter and a second monostable wherein the output of the inverter is coupled to the input of the second monostable.

However, Underhill discloses (figure 4 and its description from column 4, lines 5 – 15):

- a. a first monostable (10'); and
- b. a serial circuit coupled in parallel to the first monostable (10'), the serial circuit includes an inverter (40) and a second monostable (10'') wherein the output of the inverter (40) is coupled to the input of the second monostable (10'').

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine figure 1, Carlin et al., and Underhill as providing the requirements of the instant claimed invention for splitting the monostable receivers (column 1, line 57 to column 2, line 24).

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Regarding claim 6, as followed by the limitations analyzed in claim 5, figure 1 further discloses the output of superhet receiver (page 1, line 24 to page 2, line 7 of the specification); while Carlin et al. discloses (figure 4) that each I and Q channels receives a corresponding one of the mixer (180).

Regarding claim 21, the limitations are analyzed in the same manner set forth as claim 5.

Regarding claim 22, the limitations are analyzed in the same manner set forth as claim 6.

Regarding claim 31, the limitations are analyzed in the same manner set forth as claim 5.

Regarding claim 32, the limitations are analyzed in the same manner set forth as claim 6.

Regarding claim 41, the limitations are analyzed in the same manner set forth as claim 5.

#### ***Allowable Subject Matter***

4. **Claims 7 – 12, 16, 23 - 28, 33 – 38, and 42 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Yamagishi et al. (US patent # 6,516,186 B1) discloses an image-rejection receiver.

Gu et al. (US patent # 5,018,524) discloses an apparatus and its corresponding method for generating vital information signals.

Nagasaki (US patent # 4,737,842) discloses a color emphasis circuit.

***Contact Information***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 5:30 AM to 17:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (571) 272-3021. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

September 13, 2004

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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